

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/11/2017

Reviewed on 12/11/2017

1 Identification

- **Product identifier**
- **Trade name:** Conductivity
Reagent A
- **Article number:** MU-008
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson sherman@aquasolutions.org
- **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Repr. 1 H360 May damage fertility or the unborn child.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Boric Acid
- **Hazard statements**
May damage fertility or the unborn child.
- **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

| | | |
|------------|---|----------------|
| HEALTH | 2 | Health = 2 |
| FIRE | 1 | Fire = 1 |
| REACTIVITY | 0 | Reactivity = 0 |

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

| | | |
|-----------------|---------------------|----------|
| CAS: 56-81-5 | Glycerin (Glycerol) | 83.9933% |
| CAS: 10043-35-3 | Boric Acid | 15.9668% |

- **Table of Nonhazardous Ingredients**

| | | |
|--------------|-----------------|---------|
| CAS: 77-09-8 | Phenolphthalein | 0.0399% |
|--------------|-----------------|---------|

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· PAC-1:

| | | |
|-----------------|---------------------|----------------------|
| CAS: 56-81-5 | Glycerin (Glycerol) | 45 mg/m ³ |
| CAS: 10043-35-3 | Boric Acid | 6 mg/m ³ |
| CAS: 77-09-8 | Phenolphthalein | 4 mg/m ³ |

· PAC-2:

| | | |
|-----------------|---------------------|-----------------------|
| CAS: 56-81-5 | Glycerin (Glycerol) | 180 mg/m ³ |
| CAS: 10043-35-3 | Boric Acid | 23 mg/m ³ |
| CAS: 77-09-8 | Phenolphthalein | 44 mg/m ³ |

· PAC-3:

| | | |
|-----------------|---------------------|-------------------------|
| CAS: 56-81-5 | Glycerin (Glycerol) | 1,100 mg/m ³ |
| CAS: 10043-35-3 | Boric Acid | 830 mg/m ³ |
| CAS: 77-09-8 | Phenolphthalein | 260 mg/m ³ |

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· Components with limit values that require monitoring at the workplace:

| | |
|----------------------------------|---|
| CAS: 56-81-5 Glycerin (Glycerol) | |
| PEL | Long-term value: 15* 5** mg/m ³ mist; *total dust **respirable fraction |

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| | |
|-----------------------------------|---|
| TLV | TLV withdrawn-insufficient data human occup. exp. |
| CAS: 10043-35-3 Boric Acid | |
| TLV | Short-term value: 6* mg/m ³ Long-term value: 2* mg/m ³ *as inhalable fraction |

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling.

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Clear viscous

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 182 °C (359.6 °F)

· **Flash point:** 160 °C (320 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 400 °C (752 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

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| | |
|--|---|
| · Danger of explosion: | Product does not present an explosion hazard. |
| · Explosion limits: | |
| Lower: | 0.9 Vol % |
| Upper: | Not determined. |
| · Vapor pressure at 20 °C (68 °F): | 0.1 hPa (0.1 mm Hg) |
| · Density at 20 °C (68 °F): | 1.2526 g/cm ³ (10.45295 lbs/gal) |
| · Relative density | Not determined. |
| · Vapor density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 84.0 % |
| VOC content: | 0.00 % |
| | 0.0 g/l / 0.00 lb/gl |
| Solids content: | 16.0 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

| | | |
|------|------|--------------------|
| Oral | LD50 | 16,660 mg/kg (rat) |
|------|------|--------------------|

CAS: 10043-35-3 Boric Acid

| | | |
|------|------|-------------------|
| Oral | LD50 | 2,660 mg/kg (rat) |
|------|------|-------------------|

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.

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- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

| | |
|------------------------------|----|
| CAS: 77-09-8 Phenolphthalein | 2B |
|------------------------------|----|

- **NTP (National Toxicology Program)**

| | |
|------------------------------|---|
| CAS: 77-09-8 Phenolphthalein | R |
|------------------------------|---|

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|---------------|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADN, IMDG, IATA | Not regulated |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, ADN, IMDG, IATA | Not regulated |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT, ADN, IMDG, IATA · Class | Not regulated |

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- | | |
|--|-----------------|
| · Packing group · DOT, IMDG, IATA | Not regulated |
| · Environmental hazards: · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Not regulated |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

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| · Section 355 (extremely hazardous substances): |
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| |
|------------------------------------|
| None of the ingredients is listed. |
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| · Section 313 (Specific toxic chemical listings): |
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|--------------------------------|
| CAS: 77-09-8 Phenolphthalein |
|--------------------------------|

| |
|---|
| · TSCA (Toxic Substances Control Act): |
|---|

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|---------------------|
| Glycerin (Glycerol) |
|---------------------|

| |
|------------|
| Boric Acid |
|------------|

| |
|-----------------|
| Phenolphthalein |
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|--|
| · TSCA new (21st Century Act) (Substances not listed) |
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|-------------------------|
| · Proposition 65 |
|-------------------------|

| |
|---|
| · Chemicals known to cause cancer: |
|---|

| |
|--------------------------------|
| CAS: 77-09-8 Phenolphthalein |
|--------------------------------|

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|--|
| · Chemicals known to cause reproductive toxicity for females: |
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|------------------------------------|
| None of the ingredients is listed. |
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|--|
| · Chemicals known to cause reproductive toxicity for males: |
|--|

| |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

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|---|
| · Chemicals known to cause developmental toxicity: |
|---|

| |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

| |
|----------------------------------|
| · Carcinogenic categories |
|----------------------------------|

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|--|
| · EPA (Environmental Protection Agency) |
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| |
|------------------------------|
| CAS: 10043-35-3 Boric Acid |
|------------------------------|

| | |
|--|----------|
| | I (oral) |
|--|----------|

| |
|---|
| · TLV (Threshold Limit Value established by ACGIH) |
|---|

| |
|------------------------------|
| CAS: 10043-35-3 Boric Acid |
|------------------------------|

| | |
|--|----|
| | A4 |
|--|----|

| |
|---|
| · NIOSH-Ca (National Institute for Occupational Safety and Health) |
|---|

| |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

| |
|--|
| · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). |
|--|

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· **Hazard pictograms**



GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Boric Acid

· **Hazard statements**

May damage fertility or the unborn child.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protection.

IF exposed or concerned: Get medical advice/attention.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** *Environment protection department.*

· **Contact:**

· **Date of preparation / last revision**

12-11-2017: review SDS for accuracy. STN

Revision 0.0, 07-22-2015; Creation date for SDS. STN

12/11/2017 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Repr. 1: Reproductive toxicity – Category 1